As we enter our 34th year of programming, FEF’s vision to produce scholars who address significant challenges confronting our nation and the world is now reality. Through research and publications, our graduates contribute substantially to the creation of knowledge. They then use that knowledge to not only provide professional leadership for major colleges and universities, but also, as this edition of the Focus documents, to promote the growth and development of our doctoral and pre-college programs.

Because the McKnight program primarily provides Fellowships to new Ph.D. students, seldom do we at FEF write about the success of our Junior Faculty Development Fellowship (JFF) Program, which is designed to enhance the ability of junior faculty to earn tenure and promotion in their universities. Our JFF Program, like our new Fellows Program, substantially bolsters FEF’s ability to achieve our goals and mission to support scholars who contribute to their profession and serve as role models and mentors for generations of McKnight Fellows and other students.

You will read in this edition of the Focus how two such JFF alumni, Drs. Mildred Maldonado-Molina and Sylvia Wilson Thomas, earned tenure and promotion at their universities, all while selflessly mentoring young scholars. They continued their generous mentorship this summer, drawing on their successful professional experiences to share invaluable insight with McKnight Fellows on best practices for earning the Ph.D. and for securing tenure track and postdoctoral appointments as well as other employment opportunities.

You also will read about JFF Dr. Elizabeth Hordge-Freeman, whose upcoming book, Second Class Daughters: Informal Adoption as Modern Slavery in Brazil, not only helped her earn promotion to Associate Professor at the University of South Florida, but also adds to the body of knowledge for her discipline and helps society understand the significance of advancing important humanitarian causes, especially those that seek to redress inequalities resulting from social and institutional racism.

While we know research and writing are invaluable instruments for developing and disseminating knowledge, we also seek to impart knowledge to help our pre-college students gain access to cutting edge research along with new and ever changing technologies. This edition of the Focus shares compelling stories about how FEF’s Executive Vice President and General Counsel, refusing to accept suggestions that only minimal resources should be allotted to teach our students to code, has partnered with governmental, private and not for profit organizations to train K-12 instructors to teach coding, web design and entrepreneurship. As a result of her efforts, this summer teachers in high-needs schools and their students earned marketable industry certifications in beginning front-end web development while middle schoolers received Digital Tool Certificates in game design, and students soon will be equipped to design mobile apps to address problems in their communities.

As evident from these stories, our ability to move forward is strengthened when we rely upon the ingenuity of McKnight graduates and fully invest in human capital, offering support where necessary, embracing the inevitability of change, and assuming responsibility for determining our own destiny.

Accomplished McKnight Alumni Address Fellows at Orientation and Summer Institute

This summer, two outstanding McKnight alumni, Dr. Sylvia Wilson Thomas and Dr. Mildred Maldonado-Molina, advised 2017-18 New McKnight Fellows and advanced scholars at the Summer Research and Writing Institute on how to succeed in their programs, and about why it matters. Dr. Sylvia Thomas is an Associate Professor in the University of South Florida Electrical Engineering program, the former Chair of the FEF Board of Directors and the current Chair of the Finance and Investment Committee. Dr. Mildred Maldonado-Molina is an Associate Professor and Director of Health Outcomes and Policy at the University of Florida College of Medicine.

During the June Orientation, Thomas addressed new Fellows on the subject of the McKnight legacy. Today, with state
Alumna Dr. Elizabeth Hordge-Freeman Explores Racial Injustice in Brazil

Dr. Elizabeth Hordge-Freeman, a McKnight Junior Faculty alumna, is best described in the title, *Second Class Daughters: Informal Adoption as Modern Slavery in Brazil*. In it, she writes disquieting accounts of poor Afro-Brazilian women adopted as children, sometimes with the promise of better lives and opportunities, sometimes as a means of survival.

Hordge-Freeman describes the lives of children, who, though nominal members of adoptive, more middle-class families, take on the primary role of unpaid servant, often denied education, material comforts, and equal status to siblings and other family members. Sometimes, they are even passed on to work for a new generation of the family. It is a practice that undermines recent government policies designed to prevent exploitative labor practices. In many cases, the adoptive family is the only family the exploited woman knows, and she suffers psychological ties to the “cruel and caring intimacies” of her adoptive family.

As in her 2015 book, *The Color of Love, Racial Features, Stigma, and Socialization in Black Brazilian Families*, Hordge-Freeman is describing current characteristics of Brazil, the last Western country to abolish slavery (in 1888), which was estimated to have imported 40% of all slaves (3.8 million) brought to the Americas. Even now, there are more people of African descent in Brazil than in any other country in the world except Nigeria. Despite some recent efforts to reform centuries of injustice, Brazil largely remains a society where status and economic opportunity are tied to skin color.

Historically, Brazil has portrayed itself as a “racial democracy” to be celebrated for harmonious diversity. In fact, its diversity can be traced to post-slavery policies that encouraged *branqueamento*, racial whitening, through immigration and miscegenation. From 1890 to 1914, more than a million Europeans from Portugal, Spain, Italy, Russia, Germany, Austria, France, and the Netherlands immigrated to the country, encouraged and often subsidized by the Brazilian government. Immigration statistics of this time period predicted that Caucasian blood would eventually overtake the African phenotype, and racial whitening was deemed to have made sufficient progress.

Today, as in the past, the resistance to social and economic oppression in Brazil takes many forms, including the fight for land reparations by the quilombos, communities founded by runaway slaves; activism by individuals who embrace their African heritage; and scholarship such as that of Hordge-Freeman. She frequently speaks about her research in community as well as academic and online forums, which include universities in Brazil. She also has coordinated two student trips to Brazil as Director of the USF in Brazil program, and her book, *The Color of Love*, is under contract to be translated into Portuguese.

Dr. Hordge-Freeman’s new work with emotionally manipulated domestic workers in Brazil has implications not only for Brazilian labor policies, but also for the reintegration of human trafficking survivors in Florida. This year, she received USF grants related to the recovery and reintegration of children who have been trafficked and to study colorism in Afro-Latino families.

Dr. Hordge-Freeman was born and raised in Tampa, earned degrees at Cornell (B.A.) and Duke (M.A. and Ph.D.) Universities, and lives in Tampa with her husband, also a USF professor, and son.

**1984-2017 ~ 629 MCKNIGHT DOCTORAL FELLOWSHIP GRADUATES**

**Discipline Breakdown**

- Business (63)
- Education (36)
- Humanities (63)
- Social Sciences (167)
- STEM-Engineering/Computer Sciences (114)
- STEM-Health/Life/Physical Sciences (171)
- STEM-Mathematics/Statistics (15)
Accomplished McKnight Alumni Address Fellows at Orientation and Summer Institute

continued from page 1

and federal government cutting education by billions of dollars, the number of Hispanic and African Americans entering the professoriate has leveled. While African, Hispanic, and Native Americans together comprise about 30% of the population, they earn only 4% of engineering doctorate degrees in the United States, which, according to Thomas, uniquely positions new MDF Fellows and graduates in the discipline to help secure positions for scholars to follow.

To successfully matriculate through their graduate programs, Thomas encouraged Fellows to plan strategically and incorporate a detailed timeline for achieving specific goals and objectives. She indicated that strategic planning begins with the desired goal and works backward from the current status. In her presentations, Maldonado reminded the Fellows to make sure their matriculation goals and writing timelines fit the SMART acronym by being specific, measurable, attainable, relevant, and time-bound.

Both speakers also emphasized the importance of networking, with Thomas suggesting it can be intimidating and time consuming but an essential part of advancing one’s career. She indicated that networking should always be done with purpose, not just to collect business cards and be seen. One should approach networking like work; set a goal and then find a networking opportunity that meets the goal.

Thomas further counseled students to quickly differentiate between expectations at the undergraduate level and those in graduate school. She noted that undergraduates learn existing knowledge, while graduate students learn to create knowledge, and Maldonado added that graduate education is characterized by its emphasis on specialization. To succeed at the graduate level, students must abandon the nine-to-five mentality and accept failure as an opportunity to learn. Students must also carefully balance time and resources and make sure not to isolate themselves.

During Orientation and the Institute, Maldonado engaged McKnights with advice culled from her own success, particularly as a prolific writer. Writing, she said, is a long process that requires time; focus; a realistic, SMART timeline; and mostly, a story to tell. Scholars also need a writing routine; some need intense quiet, while others need music, and all need to brainstorm and write outlines. Maldonado advised Fellows to write when their focus is sharp and to seek a writing buddy who will help keep them accountable. In the social sciences, Maldonado said writing requires an interdisciplinary, teamwork approach, and she urged students to know the standards as well as the top three journals in their disciplines.

Both speakers encouraged McKnights to dream and envision their futures as global leaders, innovators, and problem solvers. According to Thomas, innovation is not just about creating something new, but also conducting research that creates value, something useful for solving pressing problems and addressing social, scientific, and economic needs.

Although the number of McKnights is proportionately small, to Thomas and Maldonado, they represent a special group of gifted scholars who will contribute substantially to universities and professions as well as local, national, and international communities. The careers of Thomas and Maldonado exemplify the success and service expected of McKnight Fellows. Thomas has mentored 100 masters and doctoral students, authored more than 150 articles, presentations, and book chapters, and secured ten patents and patent disclosures. Maldonado has authored more than 70 peer-reviewed articles and has served as investigator or consultant in more than 20 externally funded grants, including a five-year stint as PI of a study on alcohol, health disparities, and mortality. Both have received awards for teaching, research, and service.
McKnight Doctoral Fellow Dunwoody Mirvil: A Passion to Perform, A Drive to Teach

With an innate love for the arts, passion to perform, and drive to teach others, 2015 MDF Fellow Dunwoody Mirvil is a world-traveled trombonist from Miami, who also plays the euphonium, tuba, trumpet, and French horn, among other instruments. For over 20 years, he has honed his skills as an instrumentalist and educator, performing with various ensembles and sharing knowledge with musicians of all skill levels.

Growing up, Mirvil never thought he would perform overseas, in places like Japan, with groups such as the U.S. Army band. Not one to be confined to a single genre, he has performed classical, jazz, R&B, gospel and funk, evincing a musical versatility that afforded him the unique opportunity to tour the U.S. and Japan as a cast member in the musical stage production “Drumline Live,” an experience that allowed him to showcase his talents as a dynamic soloist for audiences in Tokyo, New York City and Los Angeles.

Mirvil continues to actively perform, even as he pursues his doctorate at FSU, as a member and featured trombone soloist with the Tallahassee Symphony Orchestra; with a cabaret cover band, Tallahassee Nights Live; and with the Seminole Trombone Quartet, which made its Carnegie Hall debut in May 2016 as winners of the annual “Noles in NYC” competition.

In addition to performing, Mirvil relishes training aspiring musicians and has taught music for at least 13 years. He directed the band at Godby High School in Tallahassee after earning his Master’s in 2013, the year he also married, and he currently coaches undergraduate trombonists as a Graduate Teaching Assistant, maintains his own studio where he works with middle and high school students, and continues to run clinics for youth in Florida and Georgia. He recalls how much he benefited from similar clinics while growing up in Miami and for years funded his own travel to conduct them, particularly at “inner city” schools. That changed in 2016, when he was commissioned as an endorsing artist with Conn-Selmer, a leading manufacturer and distributor of musical instruments and accessories, which now helps fund his travel.

The first in his family to graduate from college, Mirvil aspires to further his teaching career and expects to earn his Doctor of Music from FSU in 2018. For his dissertation, he is taking the opportunity to analyze the little-acknowledged work of Dr. Nathaniel O. Brickens, the long serving, humble African American director of the internationally acclaimed Trombone Choir at the University of Texas at Austin.

Mirvil and others regard Brickens as a pioneer of trombone pedagogy who trained several music and trombone professors, served as president of the International Trombone Association, showed other conductors how to build a successful studio and program, and inspired Mirvil to teach and help performers improve their sound.

A major way Mirvil helps horn players improve their sound is by using his D. Mirvil V, which he designed and patented in 2016 and describes as “the closest thing” to the perfect mouthpiece. Unlike most trombone mouthpieces, the D. Mirvil V is stainless steel, not brass, and it is larger. The D. Mirvil V is manufactured by Giddings, a company Mirvil says produces exemplary accessories. He met and talked with company representatives at the Florida Music Conference and later emailed Ivan Giddings about his design and provided specifications and a description. Giddings responded with prototypes, and by October 2016, Mirvil had approved the D. Mirvil V, which debuted in Chicago at the Midwest Band and Clinic, the largest music conference in the world. All profits from his mouthpiece sales go to his year-old daughter’s education account.

Eventually, Mirvil plans to design his own line of trombones. He will also write a trombonist’s book of warm up exercises (long tones, lip slurs).

Mirvil has presented at the Florida Music Educators Conference and is a member of the International Trombone Association, Florida Music Educators Association, Florida Bandmasters Association, Phi Mu Alpha Sinfonia Music Fraternity of America, Inc., and Kappa Delta Pi International Honor Society for Education.

“"We're on earth to help others for the betterment of mankind. I'll always make time to help others.””

-- MDF Fellow Dunwoody Mirvil
Brain Bowl Competitors Showcase Skills, Win College Scholarships

At FEF’s March 17, 2017, inaugural NAS Codes Mobile App Challenge, ten Center of Excellence (COE) teams from around the State began the day learning to create apps using the MIT App Inventor programming environment. By the afternoon, with help from McKnight Doctoral Fellowship University of Central Florida graduates Juan Blandon and Brian Fisher and FEF Executive Vice President Lyra Logan, Esq., they created apps that included features such as response to touch, text-to-speech, texting, camera access, and data storage. Their final submitted apps ranged from simple games, to quizzes to prepare students for Brain Bowl, to a multi-faceted system for kids to show parents their completed chores and receive commensurate allowance.

The latter app, created by the South Florida COE team of Arianna Davis, 12th grade; Alyssa Rhodd, 9th grade; and Cornelius White, 12th grade, won the Challenge high school prize. An entertaining political game developed by Aryma Moore, an 8th grader from the Hillsborough County COE, took the middle school prize. The app blurts out random U.S. presidential campaign slogans from Senator Bernie Sanders at various strategic junctures of the game.

Just down the hall from the App Challenge, teams of 11th and 12th graders competed for college scholarships in FEF’s 17th annual mathematics competition, which tests teams on SAT-level math and requires them to demonstrate mastery of linear equations and systems, data analysis, manipulation of complex equations, and geometric and trigonometric concepts. Five-member teams competed all day in this double elimination tournament until team Limitless from the Atlantic Coast COE in Fort Lauderdale emerged as State champions.

Seven-member teams in FEF’s 32nd annual state History & Culture critical reading contest also competed for scholarships, in a full day of answering questions from Dreams from My Father: A Story of Race and Inheritance, by Barack Obama, The Warmth of Other Suns: The Epic Story of America’s Great Migration, by Isabel Wilkerson, and From Slavery to Freedom: A History of African Americans, by John Hope Franklin and Evelyn Higginbotham. Questions required teams to state significant information provided in text, define words used in text, synthesize and analyze information, evaluate author assumptions and techniques, identify cause and effect, make inferences, recognize an author’s tone, and follow the logic of an analogy or argument. After a total of 19 games, the T Breds from the South Florida COE in Miami won the double elimination meet.

As their grand prize, members of the first, second and third place History & Culture and 11th-12th Grade Math Competition teams won 4-year scholarships contributed by Florida colleges and universities.

Winners who intend to go to college in Florida chose scholarships from the following schools: Florida Atlantic University-1; Florida International University-2; Florida State University-8; New College of Florida-1; Stetson University-2; University of Central Florida-2; University of South Florida-2; and University of Tampa-1.
In the spring of 2017, FEF and Opa-locka Community Development Corporation applied for a grant to prepare 210 Opa-locka area students to earn State of Florida Career and Professional Education (CAPE) industry and digital tool certification in Web and game design. The grant application called for FEF to hire 14 teachers to train the students in summer camps housed at seven underserved middle and high schools. At our grant application interview, the funders had one repeated question: Where will you find the 14 coding teachers? FEF’s answer: we don’t intend to try to find them, that will likely mean recruiting people who work at schools outside of our distressed neighborhoods during the regular academic year. Instead, we will train and certify local teachers and empower them to teach critical tech skills in Northwest Miami-Dade schools year round.

High school students at a CodeMasters Summer Tech Camp work on their computer games.

And so we did. In FEF’s first week-long Tech Instructor Institute, our certification partners trained and certified four teachers to prepare high school students for industry certification in Web design and ten to prepare middle schoolers to earn their Digital Tool Certificates in gaming. Our new trainees then worked with students for six weeks in CodeMasters’ Summer Tech Camps, where just under 75% of students ultimately earned certification.

During the Camps, high school students spent half their time preparing for certification. That preparation included learning to write Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) and creating Web sites that incorporated forms, video and audio, and at least one Application Programming Interface (API) to extend functionality such as geolocation. They also practiced validating their HTML, marking up Web pages for search engine optimization (SEO), and implementing design concepts.

High school students spent the other half of their time relating Web site development to their business goals and working through the JA Be Entrepreneurial curriculum, where they developed essential components of a business plan for an entrepreneurial venture they will start while still in high school. They also learned to recognize characteristics and practices of successful entrepreneurs; evaluate a business idea based on product, customer, and competitive advantage criteria; and demonstrate beginning business-planning skills for venture start-up, marketing, financing, management, and ethical decision-making.

Middle school students focused half their time on the fundamentals of interactive computer game creation and building several games. They learned about the game design process, including criteria and constraint identification, content research and storyboarding. They also studied computer programming concepts essential to game development, including algorithm creation, pseudocode for modeling program flow, logic errors, Boolean concepts, and elements such as variables, events, handlers, conditionals, loops, functions, objects, properties, and methods. The students spent the second part of each day preparing for high school and college and exploring careers with speakers from universities and a variety of STEM-related professions.

Each Friday, all students went on field trips, as both reward and extended learning. They visited Miami colleges, the Miami Seaquarium and the Broward Museum of Science; attended the Florida Youth Economic Development Conference; toured a television station; took coding classes at Microsoft; bowled; went to the movies; and exercised at a trampoline park.

The Miami Herald highlights FEF’s coding certification camp in downtown Opa-locka.
FEF Salutes Outstanding Achievers, Parents and Centers at 2017 Pre-College Summit

Each year, at FEF’s annual National Achievers Society (NAS) State Summit, in front of a crowd of approximately 600 attendees, FEF takes time to recognize the Achievers and parents identified by the directors of our local Centers of Excellence as volunteers of the year. The Center directors nominate parents who, over the prior twelve months, have worked actively with the local parent board, donated money for programs, and helped students complete service projects. They select students who not only meet NAS high academic standards, but also helm required service projects, attend regular leadership meetings, and help implement the Center’s monthly college prep and organizational meeting agendas.

FEF then announces the annual Dr. Israel Tribble, Jr., Florida Achiever of the Year, chosen from among those selected students, to celebrate the one who has demonstrated the greatest leadership, academic achievement, extracurricular involvement, and participation in Center of Excellence and other community service efforts. FEF selected Tallahassee Coalition Center of Excellence graduating Achiever Sydney Lyght for the 2017 honor. Sydney began college this fall at Florida A&M University, planning to major in computer engineering.

In addition to applauding student and parent volunteers, FEF congratulated the Center directors for continued program successes and presented special awards to winners of the following annual Center contests: Largest Summit Delegation and Largest Summit Parent Delegation, UCF McKnight Center of Excellence, Rasha Daniel, Director, and Most Active NAS Online Participation, South Florida Center of Excellence, Janice Fleuridor, Director.

Logan certified by MIT as Master Trainer in Educational Mobile Computing

According to recent studies, most consumers worldwide and many from lower socioeconomic groups access the Internet through mobile apps and browsers. That’s why FEF Executive Vice President & General Counsel Lyra Logan decided to expand FEF’s coding programs to include opportunities for youth to learn to develop mobile apps. But unlike other CodeMasters’ courses, where students learn solely by typing actual code, Logan chose to teach mobile computing using MIT App Inventor (AI), a blocks-based online tool.

Logan chose the approach after observing how AI facilitates creation of complex, high-impact apps, even by middle schoolers, in significantly less time than traditional programming. For example, a group of secondary girls in Nigeria incorporated AI’s location sensor and GPS functionality to create an app that helps traffic cops catch offenders, and youth in a locale with a high rate of water-borne Hepatitis A built a crowd-sourcing app using AI’s Web Viewer and Web Component to help residents find safe drinking water.

These and other examples and her own test of the tool thus spurred Logan to arrange to use AI to teach students computational thinking and programming concepts while they build useful apps to benefit their communities. She then began looking for someone to train FEF instructors to teach AI. For that, Logan turned to the AI Web site, where she discovered there were only 40 certified AI trainers in the world, only two in Florida, for a platform with over 400,000 unique monthly active users from 195 countries.

Logan also learned MIT planned to certify additional trainers, applied for and was accepted into the second cohort, completed the course work, and participated in the 3-day capstone workshop in August 2017 to become one of 20 new MIT Master Trainers in Educational Mobile Computing. This academic year, she plans to train high-needs school teachers to guide students to create apps for non-profits in new FEF Mobile App Labs in Tampa and Northwest Miami-Dade.

Upcoming FEF Events

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<tr>
<td>MDF Mid-Year Research and Writing Conference</td>
<td>Feb. 23-24, 2018</td>
<td>Tampa</td>
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<tr>
<td>33rd Annual Brain Bowl Competitions</td>
<td>March 23-24, 2018</td>
<td>Florida National Achievers Society Pre-College Summit, Orlando</td>
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The FEF’s mission is to strengthen the larger community by creating and implementing programs and services that lead to greater educational advancement for historically underrepresented groups.